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09/598,793	06/21/2000	Philippe Tarbouriech	6452/53554	6990	
7590 06/01/2007 Clarence T. Tegreene Intellectual Property Counsel / Microvision, Inc. P.O. Box 3008 19910 North Creek-Parkway			EXAMINER		
			COLIN, CARL G		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary		Application No.	Applicant(s)					
		09/598,793	TARBOURIECH, PHILIPPE					
		Examiner	Art Unit					
		Carl Colin	2136					
Period fo	The MAILING DATE of this communication ap or Reply	pears on the cover sheet with the c	correspondence ad	ddress				
WHIC - Exte after - If NC - Failu Any	ORTENED STATUTORY PERIOD FOR REPL CHEVER IS LONGER, FROM THE MAILING D nsions of time may be available under the provisions of 37 CFR 1.1.2 SIX (6) MONTHS from the mailing date of this communication. Of period for reply is specified above, the maximum statutory period treeto reply within the set or extended period for reply will, by statute reply received by the Office later than three months after the mailing ed patent term adjustment. See 37 CFR 1.704(b).	PATE OF THIS COMMUNICATION 136(a). In no event, however, may a reply be tir will apply and will expire SIX (6) MONTHS from e, cause the application to become ABANDONE	N. nely filed the mailing date of this of (35 U.S.C. § 133).					
Status								
1)	Responsive to communication(s) filed on 14 N	March 2007						
		s action is non-final.						
3)	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is							
,	closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.							
Disposit	ion of Claims							
4)⊠	P)⊠ Claim(s) <u>1-30</u> is/are pending in the application.							
	4a) Of the above claim(s) is/are withdrawn from consideration.							
	Claim(s) is/are allowed.							
6)⊠	Claim(s) <u>1-30</u> is/are rejected.							
7)	•							
8)□	Claim(s) are subject to restriction and/or election requirement.							
Applicat	ion Papers							
9) The specification is objected to by the Examiner.								
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.								
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).								
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).								
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.								
Priority ι	under 35 U.S.C. § 119							
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:								
	1. Certified copies of the priority documents have been received.							
	2. Certified copies of the priority documents have been received in Application No							
	3. Copies of the certified copies of the priority documents have been received in this National Stage							
* 0	application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.							
	see the attached detailed Office action for a list	of the certified copies not receive	eu.					
Attachmen	ut(s)							
_	ce of References Cited (PTO-892)	4) 🔲 Interview Summary	(PTO-413)					
2) 🔲 Notic	ce of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail D	ate					
	mation Disclosure Statement(s) (PTO/SB/08) er No(s)/Mail Date	5) Notice of Informal F	Patent Application					
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DETAILED ACTION

Response to Arguments

- 1. Applicant's arguments, see page 4, filed on 3/14/2007, with respect to the objection of claim 16 have been fully considered and are persuasive as amended. The objection of claim 16 has been withdrawn. However, claim 1 remains objected as explained in the objection below. The following claims 1-20 are presented for examination.
- 1.1 Applicant's arguments filed on 3/14/2007 have been fully considered but they are not persuasive. Applicant argues

"In contrast to Rhoads' reference to recording data into an audio or video data streams, claims 1-4, 6-8 recite a method for "resolving the most probable digital fingerprint" of an integrated circuit (IC). As described in the specification, the digital fingerprint identifies an IC (and hence, the identity of the system or subsystem in which the IC is embedded or placed) and is not used to superimpose data over an audio or video signal as in steganography. As further described in the specification, the fingerprint is an IC identifier that inherently arises from variations in electrical characteristics that may occur as a result of variations in the manufacturing process."

However, the claim recites (a) polling the circuit at power-up for a digital fingerprint; (b) recording the digital fingerprint; (c) repeating steps (a) and (b) a desired number of times; and (d) calculating the most probable digital fingerprint from the values yielded in steps (a) - (c). In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., above) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In addition, the specification merely refers to the fingerprint as "identification". Applicant has amended claim 1 to recite "polling the circuit at power-up for a digital fingerprint" and amended claim 6 to recite a digital fingerprint comprising a plurality of bits corresponding to electrical characteristics of a plurality of devices and claim 11 and 15 (preamble) to recite a digital fingerprint corresponding to characteristics of a circuit. Examiner cannot find support for the added limitations of claims 1, 6, 11, and 15 as claimed. Examiner respectfully disagrees with Applicant's remarks about Rhoads disclosing a method and apparatus for performing audio and video steganography. Rhoads'abstract discloses

"An identification code signal is hidden in a carrier signal (such as an electronic data signal or a physical medium) in a manner that permits the identification signal later to be discerned. The carrier signal can thereby be identified, or some machine responsive action can thereby be taken."

which meets the recitation of digital fingerprint (identification signal) corresponding to electrical characteristics of devices (embedded or hidden in a physical medium), Rhoads discloses an identification signal identifying a medium. Although Rhoads discloses audio and video as one example of the applications of the invention, Rhoads also discloses that the technique can be applied to a variety of technology including piracy and authentication, for instance, as fingerprint associated with scanning of a personal card (see fig. 25). "It is clear that wherever a material exists which is capable of being modulated by `noise-like` signals, that material is an appropriate carrier for unique identification codes and utilization of the principles of

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the invention." Rhoads further discloses an embodiment using a black box system as a real time encoder (figure 5).

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With respect to claims 15, 23, 25, and 28, Applicant argues that Eraslan requires that "The i codes are always matched..." (column 14, line 10). In contrast, the claims only require "a statistically sufficient number of matching sections" to identify a digital fingerprint. Examiner respectfully disagrees because the sentence continues "unless some of the j codes are assigned to special defects" (column 14, lines 10-13). Eraslan further discloses,

In an embodiment of the present invention a relatively lownumber (i.e., low resolution) of fiducial points is used to
uniquely identify each high resolution facial shape 1002 (j) in
a group of a face part (i)." (see column 14, lines 44-47)
"When the best facial part shape from the computer repository
3212 has been selected for each of the facial feature parts,
then a image of the suspect can be generated. In addition, the
composite codes (i, j), for the best matching facial feature
shapes can be determined for use in storing data." (see column
15, lines 34-38).

Upon further consideration, the rejection of claims 1-20 is set forth below.

Information Disclosure Statement

2. The information disclosure statement filed on 10/23/2000 and 7/12/2002 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications,

applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered. No PTO-form 1449 has been received.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 6, 11, and 15 and the intervening claims are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant's disclosure fails to recite in claim 1 "polling the circuit at <u>power-up</u> for a digital fingerprint" and a digital fingerprint comprising a plurality of

bits corresponding to electrical characteristics of a plurality of devices (claim 6) and a digital fingerprint corresponding to characteristics of a circuit (claims 11 and 15). For instance, in amended claim 1, as shown in Applicant's figure 2, the circuit is not polling at power up a plurality of times as required in step (c) and then a most probable fingerprint is calculated. On the contrary, the most probable value is calculated and stored each time the user is powered up. Examiner cannot find support with respect to claims 6, 11, and 15 as amended.

Claim Objections

4. Claim 1 and the intervening claims are objected to because in step (d), the word "the" preceding "values yielded in steps a-c" should be omitted to avoid rendering the claim indefinite. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 11-17 and 21-30 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,381,346 to Eraslan.

As per claim 11, Eraslan discloses a method for resolving an identification, said method comprising the steps of (a) receiving a digital fingerprint (see claim 1) and further discloses the fingerprint corresponds to characteristics of a circuit (i.e. the imaging system or the computer system (see column 15, lines 43-47 and column 15, lines 5-18); (b) dividing the digital fingerprint into at least two sections, the sections comprising a series of bits (see columns 13-14 and claim 1); (c) storing the sections in association with an index identification in a database (see columns 13-14 and claim 1); and (d) repeating steps (a) - (c) a desired number of times (see columns 13-14 and claim 1).

As per claim 12, Eraslan discloses the limitation of wherein said storing step (c) comprises the steps of storing each section in a separate table in association with the index identification (see figure 33 and see column 4, lines 18-32; column 12; column 13, lines 28-32); see also column 9, lines 18-20).

As per claims 13, 17, 27, and 30, Eraslan discloses the limitation of wherein separate database servers support each table (see figure 33).

As per claim 14, Eraslan discloses the limitation of (d) receiving a digital fingerprint (see claim 1); (e) dividing the digital fingerprint into at least two sections, said sections

comprising a series of bits (see columns 13-14 and claim 1; see also column 12, lines 28-42); (f) scanning the database for sections stored in step (c) that match the sections of step (e) (see column 14, lines 3-13 and column 15, lines 34-48); (g) selecting the index identification associated with a statistically sufficient number of matching sections (see column 9, lines 7-12; column 14, lines 3-13 and column 15, lines 34-48).

As per claim 15, Eraslan discloses a method for identifying a digital fingerprint corresponding to an integrated circuit from a database including a population of fingerprints, the method comprising the steps of (a) receiving a digital fingerprint (see claim 1); (b) scanning for sections of the fingerprints stored in the database that match corresponding sections of the fingerprint received in step (a) (see column 15, lines 34-48); (c) selecting the fingerprint stored in the database associated with a statistically sufficient number of matching sections (see column 14, lines 3-13; column 10, lines 27-35 and claim 17).

As per claim 28, Eraslan discloses an apparatus for identifying a digital fingerprint comprising a fingerprint section database, the database including digital fingerprints comprising a series of sections stored in association with an index identification (see column 15, lines 34-48); a server operably coupled to the fingerprint section database (see column 11, lines 21-30 and lines 50-57) wherein the server receives a digital fingerprint and scans the fingerprint associated with a statistically sufficient number of sections that match corresponding sections of the received digital fingerprints (see column 12, lines 50-60 and column 14, lines 3-13); (see also column 10, lines 27-35 and claim 17).

As per claims 16, 26, and 29, Eraslan discloses the limitation of wherein the database comprises at least two section tables each of which stores a separate section of the fingerprints in association with a corresponding index identification (see columns 13-14 and claim 1); and wherein the scanning step (b) comprises scanning the section tables with corresponding sections of the digital fingerprint received in step (a) (see column 15, lines 34-48).

As per claim 21, Eraslan discloses (e) receiving a digital fingerprint, the digital fingerprint comprising at least two sections, wherein the sections comprise a series of bits (see columns 13-14 and claim 1); (f) receiving section identifiers and corresponding stability values for each section of the digital fingerprint (see column 4, lines 59-67 and column 9, line 57 through column 10, line 21); (g) using the sections having the highest stability values, scanning the database to locate matching sections (see column 10, lines 22-35); and (h) selecting the index identification associated with a statistically sufficient number of matching sections (see column 4, lines 45-58 and column 9, line 57 through column 10, line 35).

As per claim 22, Eraslan discloses the limitation of (i) if no index identification corresponds to a statistically sufficient number of matching sections, scanning the database for all sections stored in step (c) that match the sections received in step (e) (see column 9, lines 7-17 and column 5, lines 5-10); and (j) selecting the index identification associated with a statistically sufficient number of matching sections (see column 4, lines 45-58 and column 9, line 57 through column 10, line 35).

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Claim 23 recites the same limitations found in claim 22 and claim 15. Therefore, claim

23 is rejected based on the same rationale as the rejection of claim 22 and 15.

As per claim 24, Eraslan discloses the limitation of (e) receiving at least two section

identifiers and corresponding sections of a digital fingerprint, said sections comprising a series of

bits (see column 4, lines 59-67); (f) scanning the database to find sections stored in step (c) that

match sections received in step (e) (see column 9, lines 35-56); and (g) selecting the index

identification associated with a statistically sufficient number of matching sections (see column

4, lines 45-58 and column 9, line 57 through column 10, line 35).

As per claim 25, Eraslan discloses a method for identifying a digital fingerprint from a

database including a population of fingerprints, the method comprising the steps of (a) receiving

at least two section identifiers and corresponding sections of a digital fingerprint, said sections

comprising a series of bits (see column 4, lines 59-67); (b) scanning the database to find sections

of the stored fingerprints corresponding to the section identifiers received in step (a) that match

the sections received in step (a) (see column 9, lines 35-54); and (c) selecting the fingerprint

associated with a statistically sufficient number of matching sections (see column 4, lines 45-58

and column 9, line 57 through column 10, line 35).

Claim Rejections - 35 USC § 103

- 6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,026,193 to Rhoads in view of US Patent 6,058238 to Ng.

As per claim 1, Rhoads discloses a method for resolving the most probable digital fingerprint from a circuit (see figure 5), the circuit outputting a digital fingerprint comprising a series of bits, the method comprising the steps of (a) polling the circuit for a digital fingerprint (see column 7); (b) recording the digital fingerprint (see column 7); (c) repeating steps (a) and (b) a desired number of times (see column 7); and (d) calculating the most probable digital fingerprint from the values yielded in steps (a) - (c) (see column 7, see also columns 3-4).

Rhoads suggests restarting the encoding process, i.e. resetting the noise source to repeat the sequence just produced in order to generate a unique code number that could be interpreted as polling the circuit at power up for a digital fingerprint (column 21, line 59 through column 22, line 3). Ng in an analogous art teaches polling a circuit at power up each time for a new

identifier in order to create a resetting period so that a unique recorder identifier (fingerprint) is generated (see column 7, lines 14-34). This provides control for recording to only a particular recorder (see column 2, lines 26-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of **Rhoads** to generate a device identifier at power up so that the chances of having two devices with the same identifier is very negligible (one out of 16 million) as taught by **Ng**. This modification would have been obvious because one of ordinary skill in the art would have been motivated by the suggestions provided by **Ng** so as to provide control for recording to only a particular recorder (see column 2, lines 26-30).

As per claim 2, Rhoads discloses the limitation of (e) storing the most probable digital fingerprint (see column 5, lines 13-15).

As per claim 3, Rhoads discloses the limitation of (e) calculating the stability value of at least one bit in said digital fingerprint (see column 16, lines 13-51).

As per claim 4, Rhoads discloses the limitation of (f) storing the most probable digital fingerprint in association with the stability value calculated in step (e) (see column 16, lines 18-48; see also column 17, lines 25-37).

As per claim 6, Rhoads discloses the limitation of an apparatus providing a digital fingerprint comprising a digital fingerprint circuit, said digital fingerprint circuit outputting a

digital fingerprint comprising a plurality of bits (see figures 5-6); a control circuit, said control circuit operably connected to the digital fingerprint circuit and programmed to iteratively read the digital fingerprint a predetermined number of times (see column 9); and wherein the control circuit calculates the most probable digital fingerprint based on the iterative reads of the digital fingerprint circuit (see column 9). Rhoads also discloses that the technique can be applied to a variety of technology including piracy and authentication, for instance, as fingerprint associated with scanning of a personal card (see fig. 25). "It is clear that wherever a material exists which is capable of being modulated by `noiselike` signals, that material is an appropriate carrier for unique identification codes and utilization of the principles of the invention." Rhoads further discloses an embodiment using a black box system as a real time encoder (figure 5). Ng in an analogous art teaches polling a circuit at power up each time for a new identifier in order to create a resetting period so that a unique recorder identifier (fingerprint) is generated (see column 7, lines 14-34). This provides control for recording to only a particular recorder (see column 2, lines 26-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Rhoads to generate device identifier corresponding to electrical characteristics of a plurality of devices so that the chances of having two devices with the same identifier is very negligible (one out of 16 million) as taught by Ng. This modification would have been obvious because one of ordinary skill in the art would have been motivated by the suggestions provided by Ng so as to provide control for recording to only a particular device(see column 2, lines 26-30).

As per claim 7, Rhoads discloses the limitation of further comprising a memory operably connected to the control circuit wherein the control circuit stores the most probable digital fingerprint in the memory (see figure 6).

As per claim 8, Rhoads discloses the limitation of wherein the control circuit calculates a stability value for at least one bit of the digital fingerprint based on the iterative reads of the digital fingerprint circuit (see column 9 and column 16, lines 13-51).

6.1 Claims 5, 9, 10, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,026,193 to Rhoads in view of US Patent 6,381,346 to Eraslan.

As per claims 5 and 9, Rhoads substantially teaches the claimed method of claim 1.

Rhoads further teaches the step of calculating the step of calculating the stability value of each bit in said digital fingerprint (see column 16, lines 13-51; see also columns 21-22). Rhoads further discloses storing the stability value of the least stable bit in association with the most probable digital fingerprint (see column 16, lines 18-48; see also column 17, lines 25-37; see also column 23). Rhoads does not explicitly teach storing for each section, the stability value of the least stable bit in each section in association with a section identifier and the most probable digital fingerprint calculated in step (d). However, Eraslan in an analogous art teaches dividing codes in sections and storing the stability value of the least stable bit in each section in association with a section identifier and the most probable digital fingerprint (see column 13, lines 25 through column 14; see column 14, lines 44-47). Therefore, it would have been obvious

Rhoads to divide each section with stability value associated with section identifier and most probable fingerprint to provide a fast search engine as taught by Eraslan. This modification would have been obvious because one skilled in the art would have been motivated by the suggestions provided by Eraslan so as to provide a fast search engine for large collection of data (see column 3, lines 1-8).

As per claim 10, Rhoads discloses the limitation of further comprising means for transmitting the digital fingerprint and the stability values stored in the memory (see column 16, lines 40-60).

As per claim 18, Rhoads substantially teaches the claimed method of claim 1.

Rhoads further teaches the step of transmitting encoded signal as well known in the art and transmitting the most probable digital fingerprint (see column 16, lines 40-60). Rhoads does not explicitly teach using section identifiers to associate data. However, Eraslan in an analogous art teaches dividing codes in sections and storing the stability value of the least stable bit in each section in association with a section identifier and the most probable digital fingerprint (see column 13, lines 25 through column 14; see column 14, lines 44-47 and column 9, line 57 through column 10, line 21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Rhoads to transmit the stored data as mentioned in the limitation of claims 18 and 19. This modification would have been

obvious because one skilled in the art would have been motivated by the suggestions provided by **Eraslan** so as to store data as a fast search engine and transmit them.

As per claim 19, Eraslan discloses the limitation of (g) transmitting at least two section identifiers and corresponding sections of the most probable digital fingerprint, the sections having the highest stability values calculated in step (e) (see column 4, lines 59-67 and column 9, line 57 through column 10, line 35).

As per claim 20, Eraslan discloses the limitation of wherein the number of sections transmitted in step (g) is statistically sufficient to find a matching digital fingerprint (see column 4, lines 45-58 and column 9, line 57 through column 10, line 35).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7.1 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl Colin whose telephone number is 571-272-3862. The

examiner can normally be reached on Monday through Thursday, 8:00-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser G. Moazzami can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Carl Colin

Patent Examiner

May 24, 2007

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